

# **PYRAMID<sup>®</sup>** **Studio** **PRO**

# OWNER'S MANUAL



**MODEL PM-8501/PM-8001/PM-7501/PM-4001**  
**[www.pyramidcaraudio.com](http://www.pyramidcaraudio.com)**

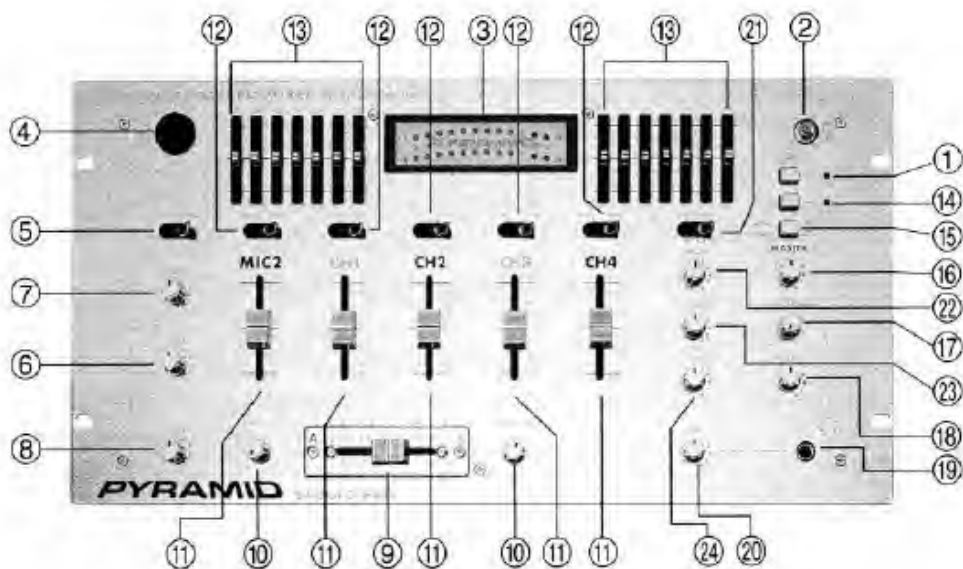
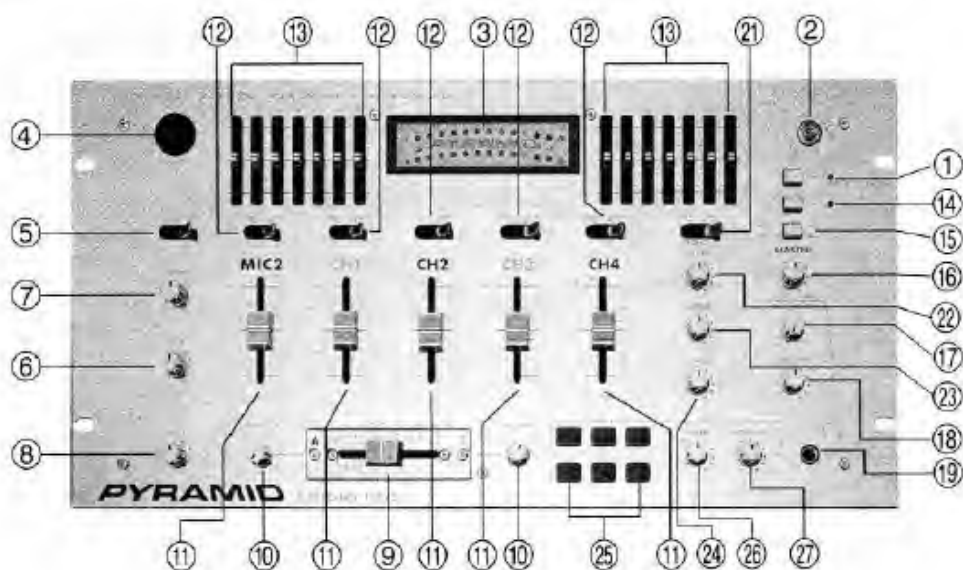
# INTRODUCTION

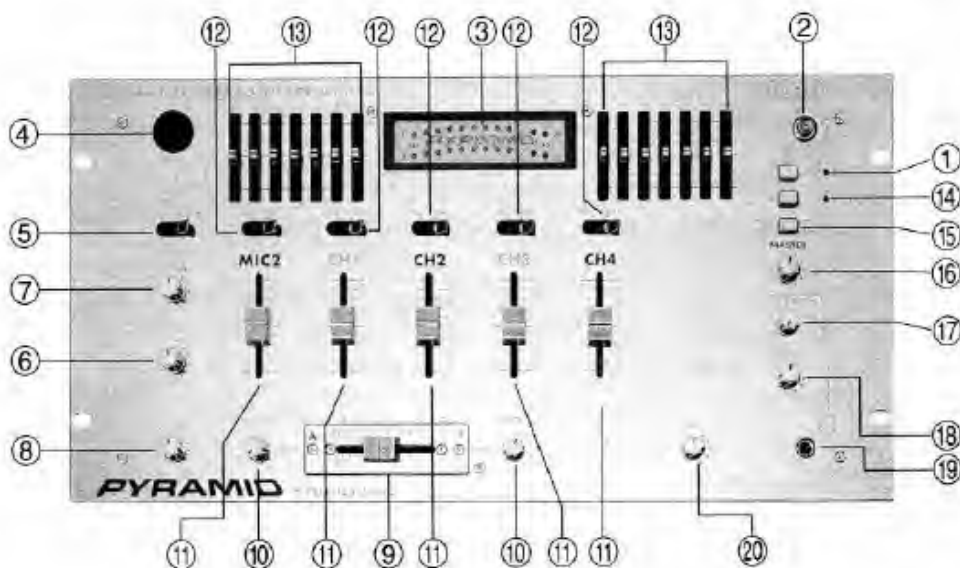
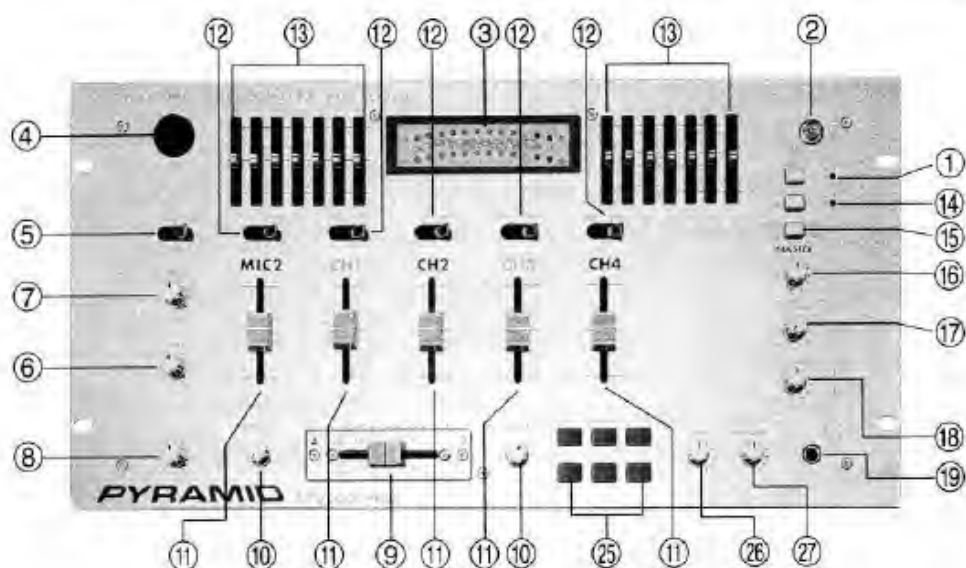
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Thank you for purchasing the PYRAMID Professional DJ Mixer. The Mixer has been designed as a sophisticated control center, perfect for mixing sound sources from multiple playback sources or from live performances, it offer you the best features to adjust sound levels, create the special sound performance and tailor the sound to compensate for environmental conditions or for personal preference.

## FEATURES

1. Power on/off
2. BNC Lamp Adaptor
3. Dual LED Meter
4. MIC 1 XLR input
5. MIC 1 Talkover
6. MIC 1 Bass Tone Control
7. MIC 1 Treble Tone Control
8. MIC 1 Level Control
9. Dual Railed Removeable Crossfader
10. Crossfader Assign Switch
11. Channel Volume Control
12. Input Device Selector
13. 7-Band Frequency Equalizer
14. EQ Bypass Switch
15. MONO/STEREO Selector
16. Master Level control
17. CUE Assign Selector
18. CUE Level Control
19. Head Phone Jack
20. CUE/MASTER Fader (PM-8001/PM-4001)
21. ECHO ON/OFF Switch (PM-8501/PM-8001)
22. ECHO DELAY Control (PM-8501/PM-8001)
23. ECHO REPEAT Control (PM-8501/PM-8001)
24. ECHO LEVEL Control (PM-8501/PM-8001)
25. Digital Sound Effect (PM-8501/PM-7501)
26. Sound Effect SPEED Control (PM-8501/PM-7501)
27. Sound Effect VOLUME Control (PM-8501/PM-7501)
28. Input Devices
  - MIC 2 : HI or LO Impedance
  - CHANNEL 1: PHONO 1, LINE 1
  - CHANNEL 2: PHONO 2, LINE 2
  - CHANNEL 3: LINE 3, LINE 4
  - CHANNEL 4: LINE 5, LINE 6





# FUNCTIONS

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1. **Power ON/OFF**  
Push in to turn power on, push again to turn power off.
2. **BNC LAMP ADAPTOR**  
Let you connect a 12V/3W max lamp to light up the unit.
3. **DUAL LED METER**  
Indicate the output signal level of the master channel.
4. **MIC 1 XLR INPUT**  
For connecting balanced or unbalanced, low impedance XLR type microphone.
5. **MIC 1 AUTO TALKOVER**  
Allows you to lowers the sound of the input sources so you can talk over them using the DJ's microphone.
6. **MIC 1 BASS TONE CONTROL**  
Let you adjust the bass of the primary microphone (MIC 1) to improve the DJ's sound.
7. **MIC 1 TREBLE TONE CONTROL**  
Let you adjust the treble of the primary microphone (MIC 1) to improve the DJ's sound.
8. **MIC 1 LEVEL CONTROL**  
Let you control the microphone's volume level so you can adjust it before mixing in it.
9. **DUAL RAILED REMOVEABLE CROSSFADER**  
Let you smoothly switch between two input sources.
10. **CROSSFADER ASSIGN SWITCH**  
Let you quickly and smoothly switch between two assigned sources of each playing channel.
11. **CHANNEL VOLUME CONTROL**  
Slide upwards to increase volume of the channel, downwards to decrease.
12. **INPUT DEVICE SELECTOR**  
Let you select the input source of each playing channel.
13. **7-BAND FREQUENCY EQUALIZER**  
Allows you to tailor the sound output to your preference.

# FUNCTIONS

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## 14. EQ/BYPASS SWITCH

Push in to operate equalizer function, push out to defeat equalizer function.

## 15. MONO/STEREO SELECTOR

Push in to get MONO master output, push out to get STEREO master output.

## 16. MASTER LEVEL CONTROL

Let you control the mixer's overall volume level.

## 17. CUE ASSIGN SELECTOR

Let you select the channel where the desired audio input source is located so you can monitor and prepare it before mixing it in.

## 18. CUE LEVEL CONTROL

Let you adjust the headphone's volume level.

## 19. HEAD PHONE JACK

6.3 mm jack head phone connection.

## 20. CUE/MASTER FADER (PM-8001/PM-4001)

Let you adjust the level of monitoring signal between assigned cue and master output.

## 21. ECHO ON/OFF SWITCH (PM-8501/PM-8001)

Set the switch to ON to activate the echo mode.

## 22. ECHO DELAY CONTROL (PM-8501/PM-8001)

Let you adjust the delay time of echo.

## 23. ECHO REPEAT CONTROL (PM-8501/PM-8001)

Let you control the length of time a tone is repeated.

## 24. ECHO LEVEL CONTROL (PM-8501/PM-8001)

Let you control the output level of the echo effect.

## 25. DIGITAL SOUND EFFECTS (PM-8501/PM-7501)

Let you create the special sound performance from the six pre-programed sound effects.

## 26. SOUND EFFECT SPEED CONTROL (PM-8501/PM-7501)

Let you adjust the pitches of the sound effects.

## 27. SOUND EFFECT VOLUME CONTROL (PM-8501/PM-7501)

Let you adjust the volume of the sound effects.

# AUDIO CONNECTION

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## 1. CONNECTING INPUT

### A. MICROPHONE INPUT

#### a. MIC 1

Connect a balanced, low impedance (600-ohm) XLR type microphone to the XLR receptacles on the upper left corner of the mixer's front panel.

#### b. MIC 2

Connect a high quality, high impedance (10k-ohm) or low impedance (600-ohm) microphone with a 1/4-inch plug to 1/4-inch jack on the lower left corner of the mixer's back panel.

Set the switch above the volume control of MIC 2 channel to select the input you want to activate. Set to HI when using a high impedance microphone, or LO when using a low impedance microphone.

### B. LOW LEVEL AUDIO SOURCE INPUT

Connect up to two low-level audio sources (such as magnetic-cartridge turntables) into PHONO 1 and PHONO 2.

**NOTE:** If you connect a turntable with a magnetic cartridge, connect its ground wire (usually black or green) to GND.

### C. HIGH LEVEL AUDIO SOURCE INPUT

Connect up to six high-level audio sources (such as a tuner, cassette tape deck, CD player, camcorder, or VCR) to LINE 1, LINE 2, LINE 3, LINE 4, LINE 5, and LINE 6.

**D. CAUTION:** Do not connect an audio source with a HIGH LEVEL OUTPUT into MIC or PH. An audio source's output is HIGH LEVEL if you can raise or lower its volume with its volume control.

# AUDIO CONNECTION

## 2.CONNECTING OUTPUT

### A.AMP OUTPUT

To play the mixer's output signal through your speaker system (for events such as parties, dances, conferences, etc...), connect an audio patch cord (not supplied) from the mixer's AMP R and L jacks to your receiver/amplifier's left and right input jacks.

### B.REC OUTPUT

To record the mixer's output signal, connect an audio patch cord (not supplied) from the mixer's REC R and L jacks to your tape deck's left and right input jacks.

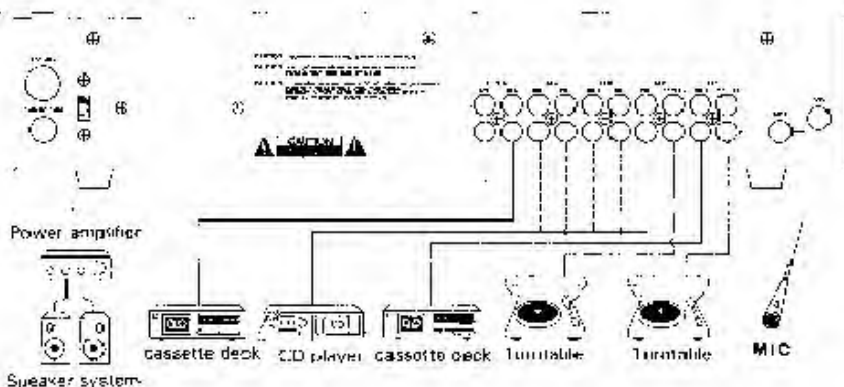
**C.CAUTION:** To avoid sudden and unusable sound outputs from the audio devices, adjust the audio devices' controls to these settings before you connect the mixer's output jacks to the audio devices' input jacks.

AUDIO DEVICE	CONTROL	SETTING
Tape Deck	POWER	OFF
Amplifier/Receiver	POWER	OFF
	TONE	FLAT

## 3.CONNECTING A LAMP

The mixer is equipped with a 12V BNC lamp adaptor for connecting a 12V/3W max lamp so you can see the control panel in a dark place.

**NOTE:** Use only a lamp with exact same specification as above.





# OPERATION

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## 1. HEAD PHONES

To listen in privacy or monitor the audio source inputs so you can locate an exact passage or section before mixing it, plug a pair of stereo headphones with a 1/4 inch plug into the PHONES jack on the lower right front corner of the mixer.

## 2. MONITORING THE INPUTS

- A. Set **POWER ON/OFF** to **ON** to turn on the mixer's power. The **POWER LED** indicator lights.
- B. Turn on the audio input source you want to mix, and set it to play (or continuously talk into microphone).
- C. Set the **CUE ASSIGN** to the audio input sources (**MIC**, **CH 1**, **CH 2**, **CH 3**, or **CH 4**) you want to monitor, so you can decide when to mix in each input and play them through your amplifier system or record them on your tape deck.
- D. Turn the **CUE LEVEL** control to adjust the headphone volume without affecting the overall mix.
- E. Turn the **CUE/MASTER FADER** control to adjust the monitoring signal level between the assigned cue source and the master output. (PM-8001/PM-4001).

## 3. MIXING THE INPUTS

- A. The maximum available audio input sources you can mixing are:
  - MIC 2**: **HI** or **LO** impedance microphone.
  - PHONO**: **PHONO 1** and **PHONO 2**. To mix the turntable connected to the **PHONO** jacks.
  - LINE**: **LINE 1**, **LINE 2**, **LINE 3**, **LINE 4**, **LINE 5**, and **LINE 6**. To mix any high-level output audio sources connected to the **LINE** jacks.
- B. Set the selected audio input sources to play.
- C. Set the corresponding **MIC**, **PHONO**, and **LINE** volume controls to approximately 8-10.
- D. Set the **INPUT DEVICE** selector as desired.
  - MIC 2**: **HI** or **LO** impedance microphone.
  - CH 1**: **PHONO 1** or **LINE 1**.
  - CH 2**: **PHONO 2** or **LINE 2**.
  - CH 3**: **LINE 3** or **LINE 4**.
  - CH 4**: **LINE 5** or **LINE 6**.

# OPERATION

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E.Rotate the MASTER volume control toward 10 until you get an average reading of 0 on both output level LED meters.

NOTE:Once you set the MASTER volume control, do not move it away from its initial setting.

The output level of LED meter indicate the total output signal levels (both the left and right channels) of all the input sources being mixed.

F.Set EQUALIZER ON/BYPASS as desired

You can tailor the sound processed through the mixer to match your acoustic surrounding and suit your personal preference with the seven sliding frequency controls.

G.When adding an audio input source, adjust the corresponding MIC, PHONO, and LINE, volume controls so you can get an average reading of 0 on both output level LED meters .

H.Adjust the receiver amplifier's (not the mixer's) volume control to the desired volume.

I.To turn off the mixer, set POWER ON/OFF to OFF. The POWER LED light turn off.

## 4.USING THE 7-BAND FREQUENCY EQUALIZER

With the seven sliding frequency controls, you can tailor the sound processed through the mixer to compensate for the acoustic surroundings and to suit your personal preference.

Set the EQ switch to ON to turn on the frequency equalizer. Then slide the control up to boost the indicated frequency range, or down to reduce it.

Each control varies by  $\pm 12\text{dB}$  the level of a narrow band of frequencies centered around the frequency noted between the controls (60, 150, 400, 1k, 2.4k, 6k and 15k Hz).

NOTE: If you set the control to the center position, the frequency range is unaltered.

# OPERATION

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In order to provide smooth frequency control, the effect of these controls must overlap slightly. Thus, the 1k Hz control has a slight effect on the range of frequencies covered by the 400 Hz and the 2.4k Hz controls.

- 60 Hz: Adjust the frequency in the low bass range (low organ notes and bass drums). Reduce rumbles or other low-frequency noise. You can also use this control to compensate for poor bass response in a recording or to reduce rumble or other low frequency deficiencies.
- 150 Hz: Adjust the frequencies in the low to middle-bass range (tuned drums, timpani and some low-bass instruments).
- 400 Hz: Adjust frequencies in the upper-bass range. An over accentuated upper bass yields a muddy, boomey sound. Too little upper bass makes the music sound hollow and thin.
- 1K Hz: Adjust the range of frequencies in the middle frequency range where the ear is most sensitive (vocals). Boosting this range enhances the vocals, cutting it makes the vocals blend back into the ensemble. This effect is often called "presence".
- 2.4K Hz: Adjusts the range of frequencies in the upper-middle frequency range that include vocals and some upper-midrange instruments (such as clarinet and saxophone). Boosting this range presence makes the program sound "brighter".
- 6K Hz: Adjust the range of frequencies in the lower high frequency range that includes flutes, oboes, violine, piccolos and other treble instruments. Boosting this range adds vibrancy to the upper voices. Too much boost can make the music sound harsh.
- 15K Hz: Adjust the high-frequency sounds (such as cymbals and other high-frequency sounds). Boosting this range adds brilliance to the music. Boosting high-frequency too much makes the music piercing and unpleasant. Boosting too little causes the program to lose its brilliance and dimensionality.

# OPERATION

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## 5. USING THE DJ'S MICROPHONE, MIC 1

### A. TALKOVER switch

- a. **TALK**: Set this switch to **TALK**, all outputs except **MIC 1** and **MIC 2** are attenuated. Only your voice can be heard clearly through **MIC 1**.
- b. **AUTO**: Set this switch to **AUTO MUTE**, it is a function of **AUTO TALKOVER**, all outputs are automatically attenuated as long as you are speaking.
- c. **OFF**: When not using **MIC 1**, set this switch to **OFF**, all outputs return to same level. This method is useful when paging.

### B. BASS and TREBLE Tone controls

you can tailor the high and low frequency sounds of **MIC 1** processed through the mix to fit the acoustic surroundings and your personal taste using the **BASS** or **TREBLE** tone controls. To enhance the sounds, rotate **BASS** or **TREBLE** towards **+10**. To reduce them, rotate **BASS** or **TREBLE** towards **-10**. To resume normal sound, set them to the middle position.

### C. LEVEL control

For a blending of voice and music, adjust the **MIC 1 LEVEL** to increase or decrease the microphone level without affecting the main volume inputs.

Set **MIC 1 LEVEL** to **0** when not using the DJ's microphone.

## 6. USING MONO/STEREO

When you set **MONO/STEREO** to **MONO**, the mixer combines the left and right channels then sends the signals to **OUTPUT R** and **L** jacks. The combined output signals can be used by a monaural amplifier, such as a PA amplifier.

When you set **MONO/STEREO** to **STEREO**, the mixer keeps the left and right stereo channels separated, then sends the signals to the **OUTPUT R** and **L** jacks. The stereo output signals can be used by a stereo amplifier or tape deck.

## 7. USING THE CROSSFADER

When two channels are playing at the same time, slide **CROSSFADER** to:

- A. **<A**: To fade in the input source selected by **ASSIGN A** and fade out the input source selected by **ASSIGN B**.

# OPERATION

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- B. B>: To fade in the input source selected by ASSIGN B and fade out the input source selected by ASSIGN A.
- C. The center : To mix the input source selected by ASSIGN A and ASSIGN B equally.

## 8.USING THE ECHO (PM-8501/PM-8001)

- A.The echo mode is applied to the sound after all the inputs are mixed.
- B.Set the ECHO ON/OFF to ON to turn on the echo mode and activate the DELAY and REPEAT functions.
- C.The DELAY control lets you include a measured time delay to simulate an echo. Set DELAY towards 10 for a maximum time delay and towards 0 for a minimum time delay.
- D.The REPEAT control lets you control the length of time a tone is repeated (reverberation). Set REPEAT towards 10 for the longest time and towards 0 for the shortest time.
- E.The LEVEL control lets you control the output level of the echo effect.  
Set LEVEL towards 10 for raising the level and towards 0 for lowering the level.

## 9.USING THE SOUND EFFECT (PM-8501/PM-7501)

- A.There are six pre-programed sound effects for your selection, LASER, MACHINE GUN, TRON BLAST, SIREN, EMERGENCY, and UFO.  
Press any button of sound effects to generate the sound you wish to mix, it will play continuously until you release the button to stop.
- B.The SPEED Control: Lets you adjust the pitches of the effects.
- C.The VOLUME Control: Lets you adjust the volume of the effects.

# TROUBLESHOOTING

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Your mixer should require very little maintenance. If you have problems, refer to this chart for possible solutions.

NOTHING WORKS	Check the AC power connection. Make sure the AC outlet is "live". Check the power connection to the rest of the system (amplifier/receiver, etc.)
NO SIGNAL FROM AN AUDIO INPUT SOURCE	Check the control setting. Check the connection between the mixer and the input source.
HUM FROM PHONO	Check the turntable's ground wire (usually black or green) to the mixer.
HUM FROM OTHER	Make sure there are no low level inputs connects to LINE input jacks.
FEEDBACK "SEQUELS"	Move the microphone further away from the output speakers or use a directional microphone.

# SPECIFICATIONS

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## INPUT SENSITIVITY/IMPEDANCE

MIC 1 (XLR jack).....	1.5mV, 600 ohm, Balanced (Low)
MIC 2 (PHONE jack).....	1.5mV, 600 ohm, Unbalanced (Low)
	6.0mV, 10K ohm, Unbalanced (High)
PHONO.....	3mV, 50K ohm
LINE.....	150mV, 27K ohm

## OUTPUT LEVEL

MAIN OUT.....	2V, 10K ohm
RECORD.....	150mV, 10K ohm
FREQUENCY RESPONSE.....	20-20K Hz +/- 3dB

## DISTORTION

MIC.....	< 0.20%
PHONO.....	< 0.05%
LINE.....	< 0.03%

## S/N RATIO

MIC.....	> 60 dB
PHONO.....	> 70 dB
LINE.....	> 80 dB

## EQUALIZER

CONTROL FREQUENCY.....	60 Hz, 150 Hz, 400Hz, 1K Hz, 2.4K Hz, 6K Hz, 15K Hz
BOOST/CUT RANGE.....	+/- 12 dB at center

## TONE CONTROL FREQUENCY FOR MIC 1

BASS.....	100 Hz
TREBLE.....	10K Hz
BOOST/CUT RANGE.....	+/- 10dB

TALKOVER ATTENUATION.....	-16dB
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ECHO DELAY TIME (PM-8501/PM-8001).....	50mS-120mS
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POWER SOURCE.....	120 VAC 60 Hz/220 VAC 50 Hz, 20W
DIMENSIONS.....	482 X 112 X 240 mm (WHD)

Specifications are typical; individual units might vary.

Specifications are subject to change and improvement without notice.

